Vadim D Knyazev

List of Publications by Year
in descending order

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76 papers	2,118 citations	201674 27 h-index	243625 44 g-index
76 all docs	76 docs citations	76 times ranked	1435 citing authors

#	Article	IF	Citations
1	The multiplexed chemical kinetic photoionization mass spectrometer: A new approach to isomer-resolved chemical kinetics. Review of Scientific Instruments, 2008, 79, 104103.	1.3	190
2	Thermochemistry of the Râ˜'O2 Bond in Alkyl and Chloroalkyl Peroxy Radicals. Journal of Physical Chemistry A, 1998, 102, 1770-1778.	2.5	139
3	Kinetics of the C2H3+ H2â‡„ H + C2H4and CH3+ H2â‡„ H + CH4Reactions. The Journal of Physical Chemistry, 1996, 100, 11346-11354.	2.9	116
4	Weak collision effects in the reaction ethyl radical .dblarw. ethene + hydrogen. The Journal of Physical Chemistry, 1993, 97, 871-880.	2.9	101
5	Experimental and Theoretical Study of the C2H3â‡„ H + C2H2Reaction. Tunneling and the Shape of Falloff Curves. The Journal of Physical Chemistry, 1996, 100, 16899-16911.	2.9	101
6	Kinetics of Reactions of H Atoms With Methane and Chlorinated Methanes. Journal of Physical Chemistry A, 2001, 105, 3107-3122.	2.5	72
7	Unimolecular Decomposition ofn-C4H9andiso-C4H9Radicals. The Journal of Physical Chemistry, 1996, 100, 5318-5328.	2.9	68
8	Kinetics of Reactions of Cl Atoms with Methane and Chlorinated Methanes. Journal of Physical Chemistry A, 2002, 106, 10532-10542.	2.5	68
9	Unimolecular Decomposition of t-C4H9 Radical. The Journal of Physical Chemistry, 1994, 98, 5279-5289.	2.9	64
10	Chemically and Thermally Activated Decomposition of Secondary Butyl Radical. Journal of Physical Chemistry A, 2000, 104, 10747-10765.	2.5	57
11	Kinetics and Products of the Self-Reaction of Propargyl Radicals. Journal of Physical Chemistry A, 2003, 107, 8893-8903.	2.5	57
12	Density of States of One-Dimensional Hindered Internal Rotors and Separability of Rotational Degrees of Freedom. Journal of Physical Chemistry A, 1998, 102, 3916-3922.	2.5	56
13	Inhibition of premixed methane flames by manganese and tin compounds. Combustion and Flame, 2002, 129, 221-238.	5.2	47
14	Kinetics of the Reaction of Vinyl Radical With Molecular Oxygen. The Journal of Physical Chemistry, 1995, 99, 2247-2249.	2.9	46
15	Kinetics of the Reaction between Propargyl Radical and Acetylene. Journal of Physical Chemistry A, 2002, 106, 5613-5617.	2.5	44
16	Kinetics of Reactions of Cl Atoms with Ethane, Chloroethane, and 1,1-Dichloroethane. Journal of Physical Chemistry A, 2003, 107, 6565-6573.	2.5	43
17	The mechanism of O(3P) atom reaction with ethylene and other simple olefins. International Journal of Chemical Kinetics, 1992, 24, 545-561.	1.6	41
18	Kinetics of Reactions of H Atoms With Ethane and Chlorinated Ethanes. Journal of Physical Chemistry A, 2001, 105, 6900-6909.	2.5	40

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19	Temperature-Dependent Kinetics of the Gas-Phase Reactions of OH with Cl2, CH4, and C3H8. Journal of Physical Chemistry A, 2004, 108, 10464-10472.	2.5	38
20	Experimental Study of the Reaction between Vinyl and Methyl Radicals in the Gas Phase. Temperature and Pressure Dependence of Overall Rate Constants and Product Yields. Journal of Physical Chemistry A, 2000, 104, 9687-9697.	2.5	35
21	Kinetics of the Reactions of Allyl and Propargyl Radicals with CH3. Journal of Physical Chemistry A, 2001, 105, 3196-3204.	2.5	35
22	Thermochemistry and Kinetics of the Reaction of 1-Methylallyl Radicals with Molecular Oxygen. Journal of Physical Chemistry A, 1998, 102, 8932-8940.	2.5	34
23	Kinetics of the Gas-Phase Reaction of OH with HCl. Journal of Physical Chemistry A, 2006, 110, 936-943.	2.5	34
24	Incorporation of Non-Steady-State Unimolecular and Chemically Activated Kinetics into Complex Kinetic Schemes. 1. Isothermal Kinetics at Constant Pressure. Journal of Physical Chemistry A, 1999, 103, 3944-3954.	2.5	33
25	Kinetics of the Reactions ofn-Alkyl (C2H5,n-C3H7, andn-C4H9) Radicals with CH3. Journal of Physical Chemistry A, 2001, 105, 6490-6498.	2.5	32
26	Experimental and Theoretical Study of the sec-C4H9 .dblarw. CH3 + C3H6 Reaction. The Journal of Physical Chemistry, 1994, 98, 11099-11108.	2.9	29
27	Kinetics of the thermal decomposition of the n-propyl radical. Proceedings of the Combustion Institute, 1992, 24, 629-635.	0.3	28
28	Effects of Chain Length on the Rates of Cî”C Bond Dissociation in Linear Alkanes and Polyetheneâ€. Journal of Physical Chemistry A, 2007, 111, 3875-3883.	2.5	28
29	Kinetics and Thermochemistry of the Reaction of 1-Chloroethyl Radical with Molecular Oxygen. The Journal of Physical Chemistry, 1995, 99, 230-238.	2.9	26
30	Computational Study of the Reactions of H Atoms with Chlorinated Alkanes. Isodesmic Reactions for Transition States. Journal of Physical Chemistry A, 2002, 106, 11603-11615.	2.5	21
31	Isodesmic Reactions for Transition States:Â Reactions of Cl Atoms with Methane and Halogenated Methanes. Journal of Physical Chemistry A, 2003, 107, 11082-11091.	2.5	20
32	Kinetics of the CH2CH2Cl â‡„ C2H4 + Cl Reaction. Journal of Physical Chemistry A, 1999, 103, 3216-3221.	2.5	19
33	Kinetics of the Self-Reaction of C2H5 Radicals. Journal of Physical Chemistry A, 2003, 107, 6804-6813.	2.5	19
34	Kinetics of the Self Reaction of Cyclopentadienyl Radicals. Journal of Physical Chemistry A, 2015, 119, 7418-7429.	2.5	18
35	Energy Dependence of .ltbbrac..DELTA.E.rtbbrac.down and the Shape of Falloff Curves: Implications for Modeling of Experimental Data. The Journal of Physical Chemistry, 1995, 99, 14738-14741.	2.9	17
36	Nonharmonic Degrees of Freedom:Â Densities of States and Thermodynamic Functions. Journal of Physical Chemistry A, 1998, 102, 9167-9176.	2.5	17

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37	Unimolecular Decomposition of the FCO Radical. Journal of Physical Chemistry A, 1997, 101, 849-852.	2.5	16
38	Formation of CO in the Reaction of Oxygen Atoms with CH3:Â Reaction over a Barrier but Not through a Saddle Point. Journal of Physical Chemistry A, 2002, 106, 8741-8756.	2.5	16
39	Comment on â€œHindered rotor density-of-states interpolation functionâ€•[J. Chem. Phys. 106, 6675 (1997)] and â€œThe hindered rotor density-of-statesâ€•[J. Chem. Phys. 108, 1748 (1998)]. Journal of Chemical Physics, 1999, 111, 7161-7162.	3.0	14
40	Kinetics of the Unimolecular Decomposition of the C2Cl3 Radical. Journal of Physical Chemistry A, 2003, 107, 6574-6579.	2.5	13
41	Kinetics of the Gas-Phase Reaction of OH with Chlorobenzene. Journal of Physical Chemistry A, 2009, 113, 10452-10459.	2.5	13
42	Classical trajectories and RRKM modeling of collisional excitation and dissociation of benzylammonium and tert-butyl benzylammonium ions in a quadrupole-hexapole-quadrupole tandem mass spectrometer. Journal of the American Society for Mass Spectrometry, 2010, 21, 425-439.	2.8	13
43	Computational Study of the Mechanism and Product Yields in the Reaction Systems C2H3+ CH3â‡„ C3H6â‡„ H + C3H5and C2H3+ CH3â†’ CH4+ C2H2. Journal of Physical Chemistry A, 2002, 106, 6952-6966.	2.5	12
44	Kinetics of the reaction between vinyl radical and ethylene. Chemical Physics Letters, 2005, 408, 339-343.	2.6	12
45	Kinetic Study of the Gas-Phase Reaction of OH with Br2. Journal of Physical Chemistry A, 2006, 110, 9169-9174.	2.5	12
46	Molecular Dynamics Simulation of Câ€“C Bond Scission in Polyethylene and Linear Alkanes: Effects of the Condensed Phase. Journal of Physical Chemistry A, 2014, 118, 2187-2195.	2.5	11
47	Kinetics and Thermochemistry of the Reactions of CH3CCl2 and (CH3)2CCl Radicals with Molecular Oxygen. Journal of Physical Chemistry A, 1998, 102, 1760-1769.	2.5	10
48	Kinetics of the Reaction of the CHCl2 Radical with Oxygen Atoms. Journal of Physical Chemistry A, 2001, 105, 76-81.	2.5	9
49	Kinetics of the reaction between methyl radical and acetylene. Proceedings of the Combustion Institute, 2002, 29, 1237-1245.	3.9	9
50	Reactivity Extrapolation from Small to Large Molecular Systems via Isodesmic Reactions for Transition States. Journal of Physical Chemistry A, 2004, 108, 10714-10722.	2.5	9
51	Thermal decomposition of dichloroketene and its reaction with H atoms. Proceedings of the Combustion Institute, 2005, 30, 975-983.	3.9	9
52	Kinetics and mechanism of the reaction of fluorine atoms with trifluoroacetic acid. Chemical Physics Letters, 2011, 512, 172-177.	2.6	9
53	Initial Stages of the Pyrolysis of Polyethylene. Journal of Physical Chemistry A, 2015, 119, 11737-11760.	2.5	9
54	Monte Carlo/RRKM/Classical Trajectories Modeling of Collisional Excitation and Dissociation of n-Butylbenzene Ion in Multipole Collision Cells of Tandem Mass Spectrometers. Journal of Physical Chemistry A, 2010, 114, 6384-6393.	2.5	8

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55	Thermal Decomposition of HN₃. Journal of Physical Chemistry A, 2010, 114, 839-846.	2.5	8
56	A numerical study of the superadiabatic flame temperature phenomenon in HN₃flames. Combustion Theory and Modelling, 2012, 16, 927-939.	1.9	7
57	Kinetics and Mechanism of the Reaction of Fluorine Atoms with Pentafluoropropionic Acid. Journal of Physical Chemistry A, 2014, 118, 4013-4018.	2.5	7
58	Kinetics of the reaction of the CCl2 biradical with NO. Chemical Physics Letters, 2003, 381, 766-770.	2.6	6
59	Kinetics of the Reaction of C2Cl3 with Cl2. Journal of Physical Chemistry A, 2003, 107, 1776-1778.	2.5	6
60	Kinetics of the Self Reaction of Cyclohexyl Radicals. Journal of Physical Chemistry A, 2011, 115, 8616-8622.	2.5	6
61	Kinetics of the Reaction of the CCl2 Biradical with Molecular Chlorine. Journal of Physical Chemistry A, 2003, 107, 10292-10295.	2.5	5
62	Kinetics of the CH2Cl + CH3and CHCl2+ CH3Radicalâ^'Radical Reactions. Journal of Physical Chemistry A, 2005, 109, 6249-6254.	2.5	5
63	Multistage mechanism of thermal decomposition of hydrogen azide. Combustion, Explosion and Shock Waves, 2014, 50, 10-24.	0.8	5
64	Kinetics of the Unimolecular Decomposition of the 2-Chloroallyl Radical. Journal of Physical Chemistry A, 2005, 109, 8149-8157.	2.5	4
65	Kinetics and mechanism of the reaction of recombination of vinyl and hydroxyl radicals. Chemical Physics Letters, 2017, 685, 165-170.	2.6	4
66	Kinetics of the CCl3 + CH3 Radicalâ^'Radical Reaction. Journal of Physical Chemistry A, 2003, 107, 6558-6564.	2.5	3
67	Correction of a calibration scale for the rapid visual semiquantitative determination of phosphate ions in agricultural samples. Journal of Analytical Chemistry, 2006, 61, 1149-1153.	0.9	3
68	Blister-colorimetric determination of phosphate ions in water, agricultural samples, and biological samples. Journal of Analytical Chemistry, 2007, 62, 37-41.	0.9	3
69	Kinetics of the self reaction of neopentyl radicals. Chemical Physics Letters, 2011, 513, 37-41.	2.6	3
70	Blister Dropâ€"Pellet Tests for Nitrates and Nitrites. Journal of Analytical Chemistry, 2002, 57, 75-82.	0.9	2
71	Kinetics and Thermochemistry of the Reaction of 2-Chloroallyl Radicals with Molecular Oxygen. Journal of Physical Chemistry A, 2004, 108, 11339-11344.	2.5	2
72	Modeling the Thermal Decomposition of Large Molecules and Nanostructures. , 0, , 219-244.		1

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73	MODELING OF SELF-IGNITION, STRUCTURE, AND VELOCITY OF PROPAGATION OF THE FLAME OF HYDROGEN AZIDE. International Journal of Energetic Materials and Chemical Propulsion, 2011, 10, 107-122.	0.3	1
74	Kinetics and mechanism of the reactions of chloromethyl radical with acetylene and decomposition of 1-chloroallyl and 2-chloromethyl vinyl radicals. Chemical Physics Letters, 2018, 691, 431-436.	2.6	0
75	Kinetics of the Reaction of the Cyclopentadienyl Radical with Nitrogen Dioxide. Journal of Physical Chemistry A, 2018, 122, 6978-6984.	2.5	0
76	Kinetics of three reactions involving the azide radical: HÂ+ÂHN3, thermal decomposition of N3, and N3Â+ÂHN3. Chemical Physics Letters, 2021, 771, 138515.	2.6	0